





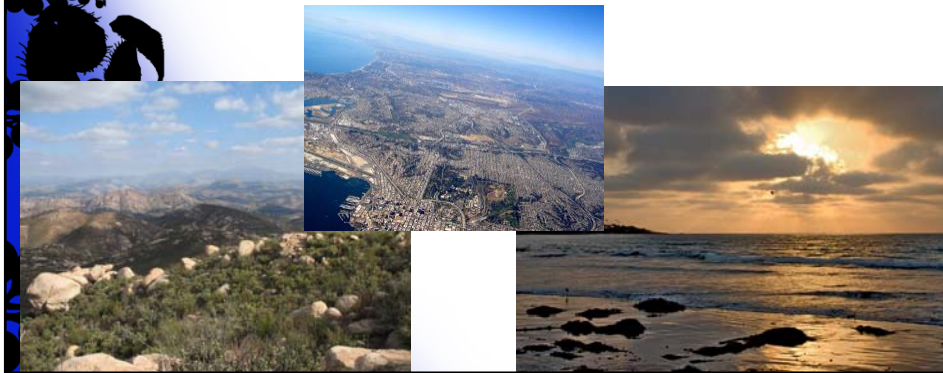
## San Diego Coastkeeper – Mission Statement

-  San Diego Coastkeeper protects the region's bays, beaches, watersheds and ocean for the people and wildlife that depend on them.
-  We balance community outreach, education, and advocacy to promote stewardship of clean water and a healthy coastal ecosystem.



## Purpose of Water Monitoring

- 🐘 Establish baseline for water quality / develop watershed-based WQOs
- 🐘 Connect people with their watersheds
- 🐘 Address pollution through a science-based approach
- 🐘 Enhance decision-making at the regulatory level
- 🐘 Get out in the field and enjoy the local environment!!



## Watershed Monitoring Program

- 🐘 Began in 2000 (quarterly), became monthly in July 2006
- 🐘 400 volunteers annually engaged
- 🐘 Lab Fellows & Watershed Captains
- 🐘 Watershed Program Interns (6 / year)



## Using Data to address watershed priorities

### San Luis Rey Watershed – Steelhead Salmon Recovery



### Chollas Creek – Disadvantaged community involvement and trash / bacteria / toxicity



  
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## Constituents

### Water Chemistry: Air & Water Temp, DO, pH, conductivity

### Lab analyses: Phosphate, Nitrate, Bacteria suite

### Toxicity: ASTM E1924 "Standard Guide for Conducting Toxicity Tests with Bioluminescent Dinoflagellates"

### Future plans include: additional nutrients, dissolved metals



  
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## Where does the data go??

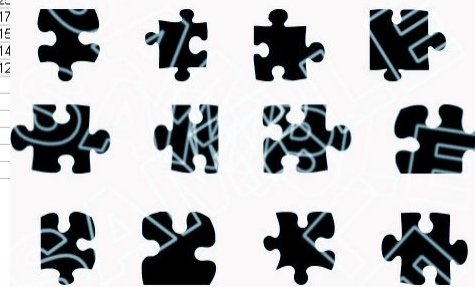
### California Environmental Data Exchange Network (CEDEN)

- Working with SCCWRP & SWRCB SWAMP team

### Back to the Volunteers and Watershed Captains

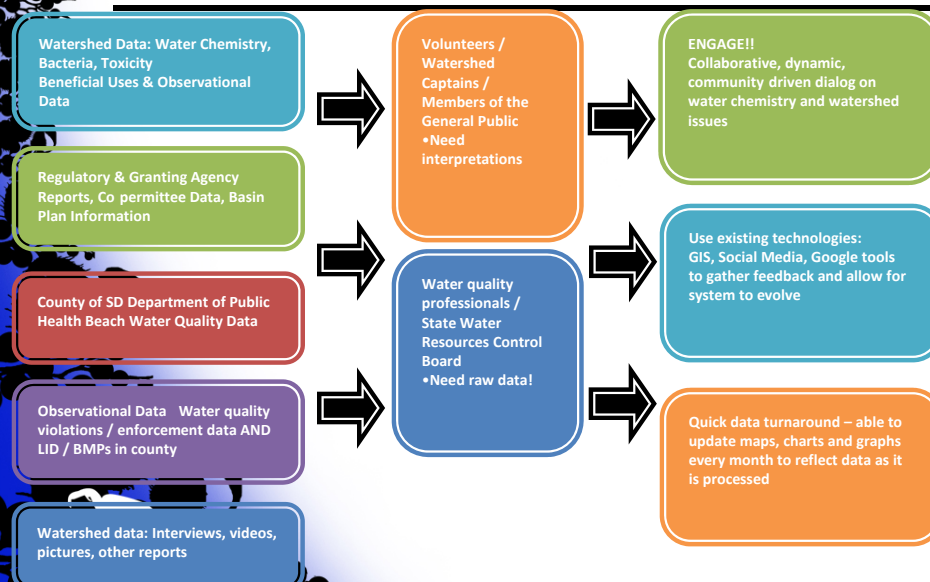
Site ID	Date of Monitoring	Air Temperature (°C)	Water Temperature (°C)	Dissolved Oxygen	pH	Conductivity (uS)
ccw60	06-Dec-08	30.0	14.6	6.40	8.00	3520.0
ccw60	22-Nov-08	22.7	17.5	8.77	8.21	3456.7
ccw60	18-Oct-08	27.7	21.0	5.63	8.01	ol
ccw60	27-Sep-08	dnm	dnm	dnm	dnm	dnm
ccw60	16-Aug-08	28.8	26.0	7.50	7.81	ol
ccw60	19-Jul-08	24.3	23.8	8.13	8.27	1420.0
ccw60	14-Jun-08	dnm	dnm	dnm	dnm	dnm
ccw60	17-May-08	29.7	25			
ccw60	19-Apr-08	20.0	17			
ccw60	15-Mar-08	18.3	15			
ccw60	23-Feb-08	22.3	14			
ccw60	12-Jan-08	21.3	12			

dnm - Did Not Monitor  
MPN- Most Probable Number



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## INPUTS / DATA SOURCES ----- AUDIENCES ----- OUTPUT NEEDS / CRITERIA



COASTKEEPER





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## Main Page



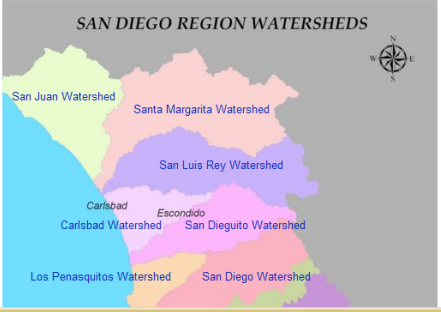



### Welcome to San Diego Watersheds Wiki

This site is a platform to share information and data about San Diego region's watersheds, along with the data collected through San Diego, Coastkeeper's water quality monitoring program.

- Check out our [tutorial](#) to get started
- Participate in our [discussions](#) about San Diego's Watersheds.
- Questions? Contact us by [e-mail](#).

Our program is completely fueled by community participation. Please add your thoughts by [registering](#) (it's easy) and starting a conversation about your watershed.



**SAN DIEGO REGION WATERSHEDS**

San Juan Watershed, Santa Margarita Watershed, San Luis Rey Watershed, Carlsbad Watershed, Escondido, San Dieguito Watershed, Los Penasquitos Watershed, San Diego Watershed

### Watershed data

- [San Juan Watershed](#)
- [Santa Margarita Watershed](#)
- [San Luis Rey Watershed](#)
- [Carlsbad Watershed](#)
  - San Elijo Lagoon
  - Escondido Creek
  - Lake San Marcos
- [San Dieguito Watershed](#)
- [Los Penasquitos Watershed](#)
  - Rose Creek
  - Tecolote Creek
  - Mission Bay



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1 Watershed Information

- 1.1 Hydrologic Areas in Otay Watershed
- 1.2 Impaired Water Bodies in Otay Watershed
- 1.3 Coastkeeper Monitoring Sites in Otay Watershed
- 1.4 Watershed Captains in Otay Watershed

2 Watershed Studies and Reports

3 Watershed Resources

4 Data Interpretations

### Watershed Information

#### Hydrologic Areas in Otay Watershed

Hydrologic Unit: 910.10 - 910.37

Hydrologic Areas: Coronado 910.1 ; Otay Valley 910.2 ; Dulzura 910.3

Major Water Bodies: (i)Upper and Lower Otay Reservoirs (ii)Otay River (iii)San Diego Bay

#### Impaired Water Bodies in Otay Watershed

CWA 303(d) List :

Impaired Waterbodies in the Otay Watershed according to the Clean Water Act Section 303(d) List

Waterbody	Pollutant/Stressor
Lower Otay Reservoir	Color, Iron, Manganese, Nitrogen, Ammonia, pH(high)
San Diego Bay Shoreline, at Glorietta Bay	Copper
San Diego Bay Shoreline, at Coronado Cays	Copper
San Diego Bay	PCBs(Polychlorinated biphenyls)
Pogo Canyon Creek	DDT
Pacific Ocean Shoreline(Impenal Beach Pier)	PCBs(Polychlorinated biphenyls)

#### Coastkeeper Monitoring Sites in Otay Watershed


San Diego Coastkeeper currently conducts monthly water quality monitoring at 3 sites in the Otay watershed.

The Site codes and their locations are as follows:


- ORW-10 : Otay Reservoir
- ORW-20 : Otay Valley Regional Park- Date St.
- ORW-30 : Otay Valley Regional Park- South

#### Watershed Captains in Otay Watershed


-None Currently-



actual size



actual size



Impaired Waters

San Diego COASTKEEPER

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## Tijuana Watershed

The Tijuana River Watershed is a binational basin which lies across the U.S./Mexican border, covering 1750 square miles from the Laguna Mountains in the U.S. to the Sierra de Juárez mountains in the south.

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- 1 Watershed information
  - 1.1 Interview with Dr. Jeff Crooks
  - 1.2 Hydrologic areas
  - 1.3 Impaired water bodies
  - 1.4 Coastkeeper monitoring sites
  - 1.5 Watershed captains
- 2 Watershed studies and reports
- 3 Watershed resources
- 4 Data interpretations

### Watershed information

#### Interview with Dr. Jeff Crooks

What are the key issues affecting the health of the Tijuana River Watershed?

Key Issue #3: Trash

Key Issue #5: Invasive Species

Hydrologic areas

Hydrologic Unit: 911.11 - 911.85

Tijuana Watershed Reference Map

actual size

Tijuana Watershed Land Use

actual size

A Natural Transformation

from San V. and

Start

Inbox - Microsoft Outlook

EPA NPS Presentation M

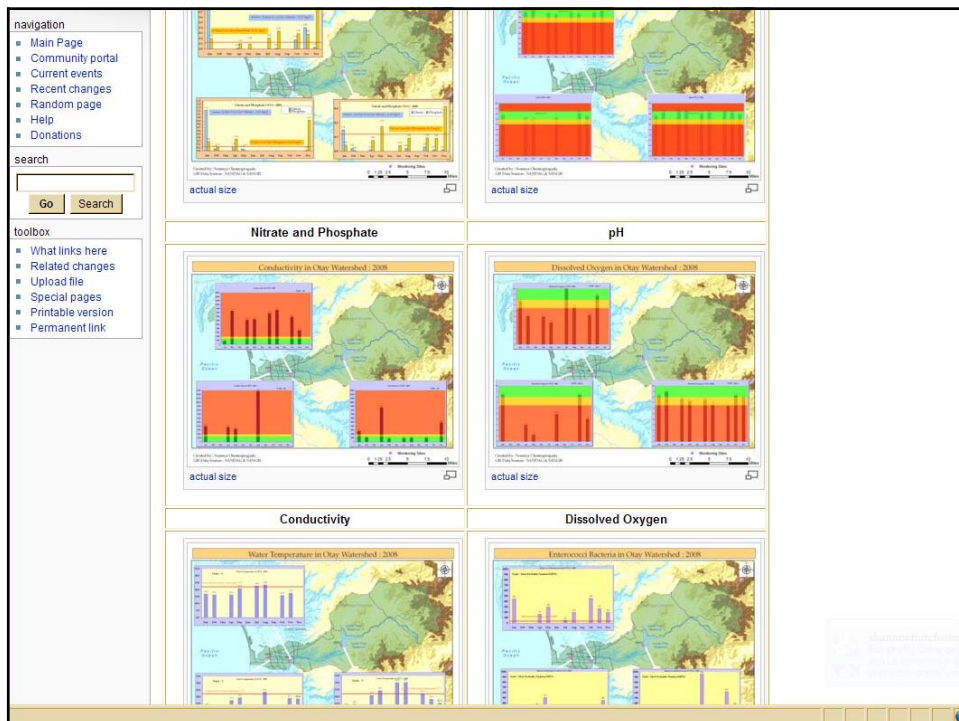
SDCK AB Hands Presents

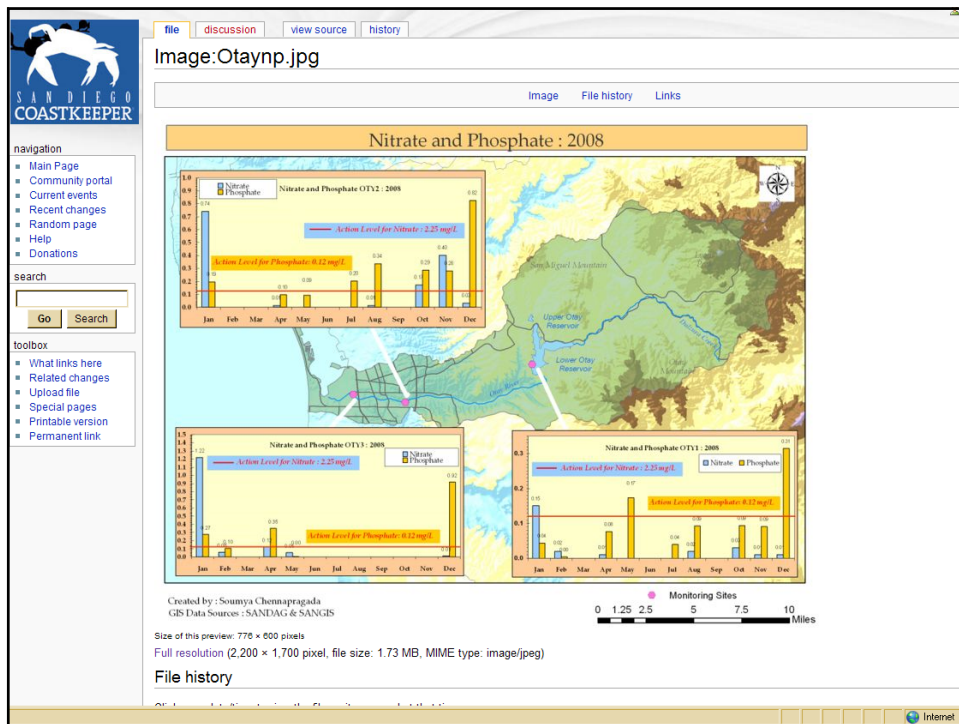
Tijuana Watershed

Internet

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**Watershed Resources**

### Storm Drain System

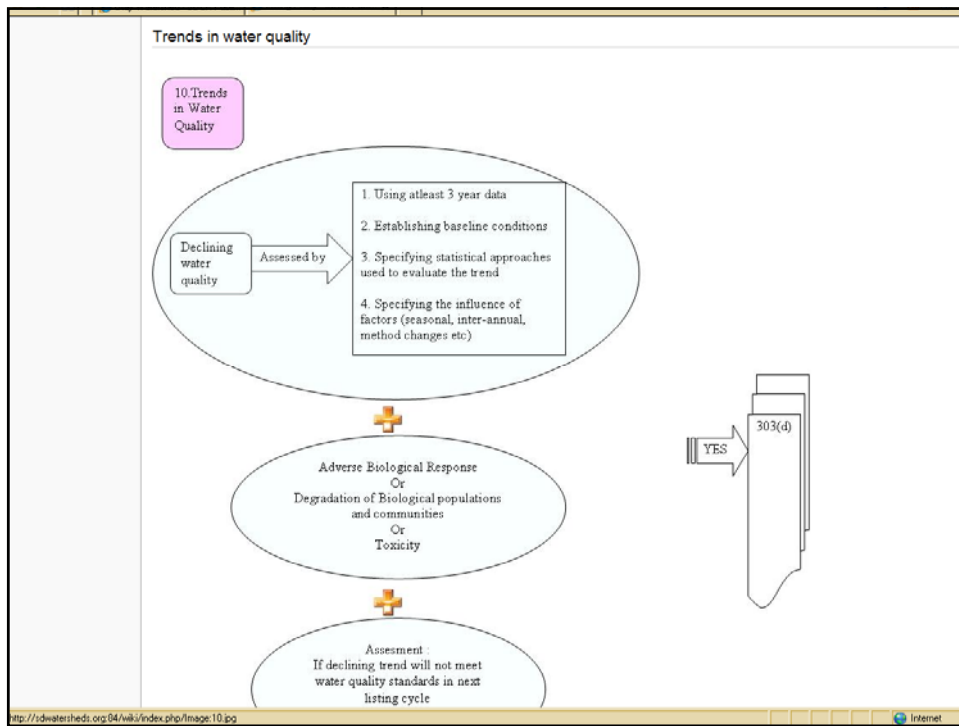
Full Size Image

### Plants

A very informative and interactive site to learn about the plants (native plants and wild) growing in a watershed.  
[San Diego Region Flora Map Viewer](#)  
[Calflora Website](#)

### Surf your watershed

FPA resource to find your watershed. You will also be able to find citizen based groups that are active in your watershed. [Click here](#)



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San Diego Coastkeeper

Calendar

San Diego Environmental Events

Today April 2009

Sun	Mon	Tue	Wed	Thu	Fri	Sat
29	30	31	Apr 1	2	3	4
		4pm The Economics 6:30am Bye Bye Gr			10am Bye Bye Gras 10:30am Science Ex	
5	6	7	8	9	10	11
	6:30pm Gardening to					
12	13	14	15	16	17	18
		4pm UCSD Lecture			Water Monitoring San Water Smart L	
19	20	21	22	23	24	25
10am EarthFair	Knowing Your H2O				San 16th Annual St	
26	27	28	29	30	May 1	2
	BioCycle Conference	4pm Think Globally,	6:30pm Climate Ch		San Free Backyard	

Events shown in time zone: Pacific Time

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## Lab protocol

Contents [hide]

- 1 Nitrate Nutrient Testing Protocol
- 2 Phosphate Nutrient Testing Protocol
- 3 pH meter Calibration Protocol
- 4 Bacteria Testing Protocol

### Nitrate Nutrient Testing Protocol

**Introduction:**  
Add something about having to test 10% of field blanks.

**Materials:**  
Disposable gloves (any except powdered latex) Deionized water (DI water) Kim Wipes Sample you wish to test (must be a large (500mL) whirlpack) Nitrate reagents (NitraVer 5 Nitrate Reagent Powder Pillows) 2 - glass 25mL containers, referred to as "sample cells" throughout instructions 1 - 50 mL beaker Colorimeter Series Stored Programs guide binder for the Colorimeter

**Set Up:**

- 1) Thoroughly clean lab benches with sanitizing solution before performing any lab tests.
- 2) Remove all food and drinks from the area.
- 3) Put on disposable gloves (except powdered latex) before handling the sample or beginning any tests.
- 4) Separate one large (500mL) whirlpack per sample site in the watershed you are testing. Be sure to keep all the samples on ice, including the samples you have separated. If you are testing the field blank for this watershed, separate the sample blank as well.

**Procedure for Testing High Range Nitrate:**

- 5) Turn on Colorimeter.
- 6) Consult the Series Stored Programs guide and find the program number for high range nitrate nitrogen (NO3-N) powder pillows. This number should be 51.
- 7) Press "PROM" on the Colorimeter keypad. The display will show: "PROM?" Enter "51" on the key pad and then press "ENTER." The display will show mg/L, NO3-N and the ZERO icon.
- 8) Fill a 25mL glass sample cell with 10mL of sample over the lab sink. Secure the cap and shake vigorously. Then dump the sample down the sink and refill the glass sample cell with 10mL of sample.
- 9) Add the contents of one NitraVer 5 Nitrate Reagent Powder Pillow to the sample cell, referred to as the "prepared sample." It is easiest to cut the pillow open with scissors. Cap the sample cell. Be careful, as the NitraVer 5 Reagent Powder is poisonous. Do not consume or inhale. Wipe any fingerprints or water off the sample cell.
- 10) Press "TIMER" and then press "ENTER" on the Colorimeter keypad. A one-minute reaction will begin within the sample cell. Shake the sample cell steady, but quickly in a deliberate manner until the timer beeps. Make sure to continuously shake the sample for the entire minute because time and technique influences the color development.
- 11) After the timer beeps, the display will show: "5.00 TIMER 2." Press "ENTER."
- 12) Place the sample cell on the lab bench out of the sun; a five-minute reaction period will begin. Note: A deposit will remain after the reagent dissolves and will not affect test results. An amber color will develop if nitrate nitrogen is present.
- 13) While the first sample cell is reacting (on the lab bench), fill another 25mL sample cell with 10mL of the same sample water. Cap, shake, dump, and refill the cell with 10mL of the same sample water. This will serve as a blank. Wipe off any fingerprints or liquid with kim wipes after capping the blank sample cell.
- 14) Place the blank sample cell into the cell holder with the diamond facing directly toward you. Tightly cover the sample cell with the instrument cap.
- 15) When the timer beeps, press "ZERO." This means you will have to wait for the five minutes to expire. The cursor will move to the right, then the display will show: "0.0 mg/L NO3-N."

Done

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## San Diego Watersheds

Wall Info Photos Notes

Write something...

Share

Send San Diego a Message  
Poke San Diego

The WIM Lab & program team organize monthly water quality snapshot events throughout all of San Diego County's watersheds. We organize volunteers, go out in the field, collect data and make that data accessible on our wiki: [www.sdwatersheds.org](http://www.sdwatersheds.org).

**Information**

Networks:  
San Diego, CA

Birthday:  
October 18, 1972

**Mutual Friends**

23 friends in common See All

Sanjay Chennappa agada  
Frederic Lam  
Shih Shih

**Friends**

124 friends See All

**Recent Activity**

San Diego and Megan Pearce are now friends. Comment Like

San Diego and Damien Pamila are now friends. Comment Like

18 more similar stories

San Diego joined the group Below the Surface. Comment Like

**Danielle Miller** Green Drinkers will unite on Wednesday, March 18th from 6:30-8:30pm at the W Hotel

This Green Drinks event will highlight two local non-profits, San Diego Coastkeeper and Stay Classy Foundation. There will be live music by San Diego's favorite DJ trio - 30ahardway featuring Atom Matter, Jon Wesley and Eddie Turbo. In addition, the W Hotel will be providing appetizers and there will be drink specials in which proceeds will go to San Diego Coastkeeper and Stay Classy.

Don't waste all your green on St. Patty's Day!  
Hope to see you there.

[http://www.sdcostkeeper.org/assets/images/home/green\\_drinkers\\_Whotellfyer.jpg](http://www.sdcostkeeper.org/assets/images/home/green_drinkers_Whotellfyer.jpg)  
March 11 at 11:44am Comment Like See Wall-to-Wall

**Recent Activity**

San Diego became a fan of Long Beach Water. Comment Like

San Diego and SD Green Campus are now friends. Comment Like

San Diego and Jacob Morris are now friends. Comment Like

3 more similar stories

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Virgin America will fly you from San Diego to destinations all over the country for as low as \$59! Offer ends soon. Act Now!

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Applications

<http://www.facebook.com/profile.php?id=1298972984&v=info&view=as-540582754>

Online Friends (2)

Internet

## Innovative Volunteer Structure

### "Environmental Stewards"

- Volunteers get training / support to become supervisors for other volunteer projects

### Partnership with other nonprofits to share volunteers

### Clean Water Ambassador Training Program




Clean Water Ambassadors

  
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## Thank you

Karen Franz

Director,  
Watershed Monitoring Program

 Karen@sdcoastkeeper.org



  
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